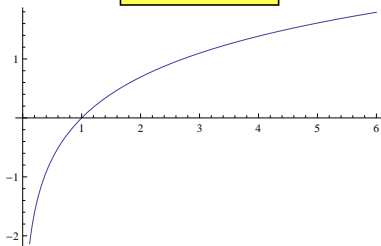


LOGARITAMSKE I EKSPONENCIJALNE FUNKCIJE

Logaritamska funkcija $f(x) = \log_a x$, $a > 1$

- rastuća funkcija, $\mathcal{D}(f) = \langle 0, +\infty \rangle$, $\mathcal{R}(f) = \mathbb{R}$

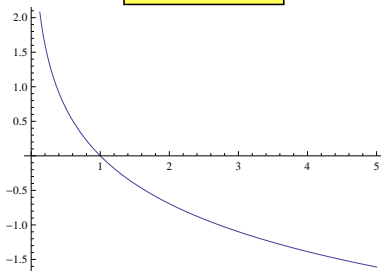
$$y = \log_a x, \quad a > 1$$



Logaritamska funkcija $f(x) = \log_a x$, $0 < a < 1$

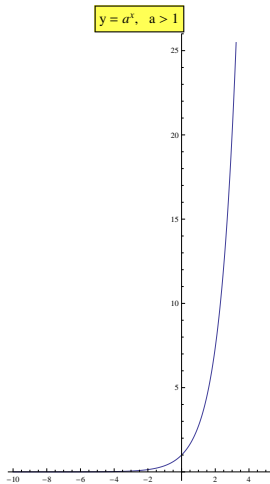
- padajuća funkcija, $D(f) = \langle 0, +\infty \rangle$, $\mathcal{R}(f) = \mathbb{R}$

$$y = \log_{\frac{1}{a}} x, \quad a > 1$$



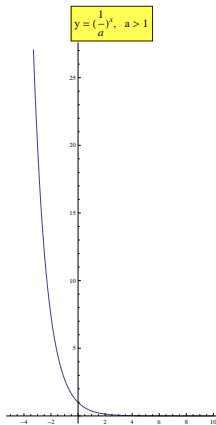
Eksponencijalna funkcija $f(x) = a^x$, $a > 1$

- rastuća funkcija, $\mathcal{D}(f) = \mathbb{R}$, $\mathcal{R}(f) = \langle 0, +\infty \rangle$



Eksponencijalna funkcija $f(x) = a^x$, $0 < a < 1$

- padajuća funkcija, $\mathcal{D}(f) = \mathbb{R}$, $\mathcal{R}(f) = \langle 0, +\infty \rangle$

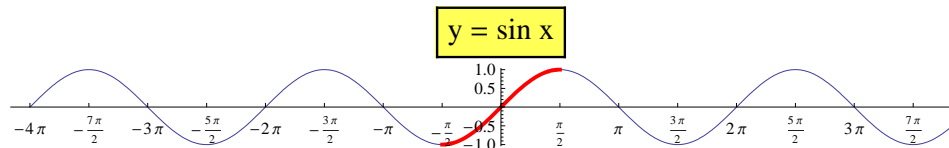


TRIGONOMETRIJSKE I ARKUS FUNKCIJE

$$\text{Sinus } f(x) = \sin x$$

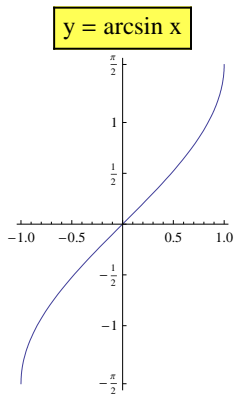
- periodična funkcija, $\text{period}=2\pi$, $\mathcal{D}(f) = \mathbb{R}$, $\mathcal{R}(f) = [-1, 1]$, nije bijekcija

- $\sin : \left[-\frac{\pi}{2}, \frac{\pi}{2}\right] \rightarrow [-1, 1]$ je bijekcija!!!



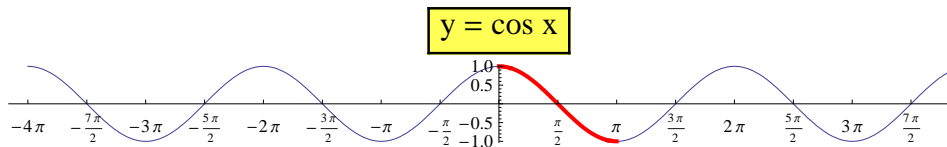
Arkus sinus $f(x) = \arcsin x$

- rastuća funkcija, $\mathcal{D}(f) = [-1, 1]$, $\mathcal{R}(f) = \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$



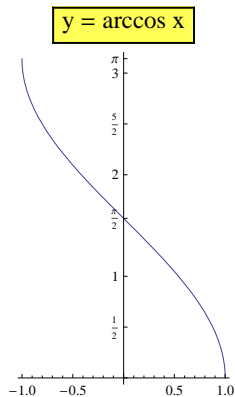
Kosinus $f(x) = \cos x$

- periodična funkcija, $\text{period}=2\pi$, $\mathcal{D}(f) = \mathbb{R}$, $\mathcal{R}(f) = [-1, 1]$, nije bijekcija
- $\cos : [0, \pi] \rightarrow [-1, 1]$ je bijekcija!!!



Arkus kosinus $f(x) = \arccos x$

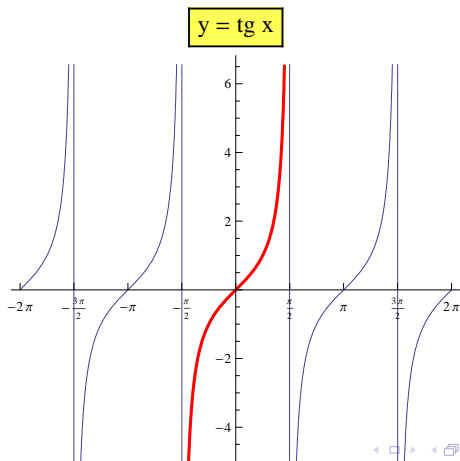
- padajuća funkcija, $\mathcal{D}(f) = [-1, 1]$, $\mathcal{R}(f) = [0, \pi]$



Tangens $f(x) = \operatorname{tg} x = \frac{\sin x}{\cos x}$

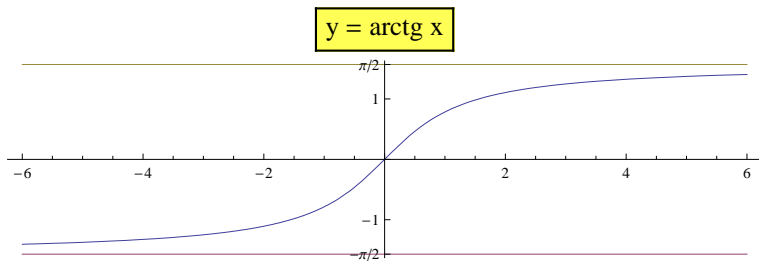
- periodična funkcija, period= π , $\mathcal{D}(f) = \mathbb{R} \setminus \{\frac{\pi}{2} + k\pi, k \in \mathbb{Z}\}$,

$\mathcal{R}(f) = \mathbb{R}$, nije bijekcija (ali $\operatorname{tg} : \langle -\frac{\pi}{2}, \frac{\pi}{2} \rangle \rightarrow \mathbb{R}$ je bijekcija!)



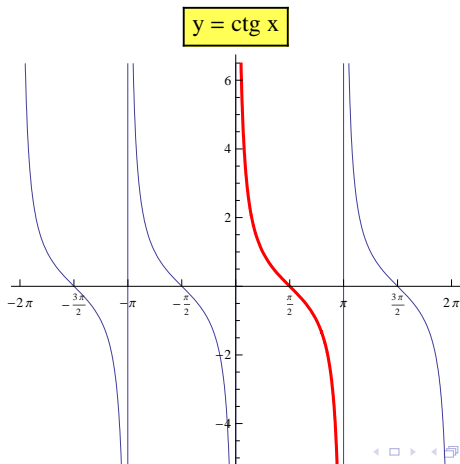
Arkus tangens $f(x) = \operatorname{arctg} x$

- rastuća funkcija, $\mathcal{D}(f) = \mathbb{R}$, $\mathcal{R}(f) = \langle -\frac{\pi}{2}, \frac{\pi}{2} \rangle$



Kotangens $f(x) = \operatorname{ctg} x = \frac{\cos x}{\sin x}$

- periodična funkcija, period= π , $\mathcal{D}(f) = \mathbb{R} \setminus \{k\pi, k \in \mathbb{Z}\}$, $\mathcal{R}(f) = \mathbb{R}$, nije bijekcija (ali $\operatorname{ctg} : \langle 0, \pi \rangle \rightarrow \mathbb{R}$ je bijekcija!)



Arkus kotangens $f(x) = \operatorname{arccotg} x$

- padajuća funkcija, $\mathcal{D}(f) = \mathbb{R}$, $\mathcal{R}(f) = \langle 0, \pi \rangle$

